CLASSIFICATION C-O-N-F-I-D-E-N-T-I-A-L

CENTRAL INTELLIGENCE AGENCY

REPORT

INFORMATION REPORT

CD NO. 25X1

COUNTRY	USSR (KazakhSSR)	DATE DISTR.	6 May 1955
SUBJECT	Leninogorskiy Polymetall Kombinat (Lead Combine)	NO. OF PAGES	10
PLACE ACQUIRED		NO. OF ENCLS. (LISTED BELOW)	25X1
DATE OF INFO.		SUPPLEMENT TO REPORT NO.	

[redacted]

[redacted]

THIS IS UNEVALUATED INFORMATION 25X1

25X1

[redacted]

1. Attached [redacted] is being forwarded as received.

2. On page 3, [redacted] Comment 1, line 7, Sashtchita should be Zashchita.

[redacted]

25X1

CLASSIFICATION C-ON-F-I-D-E-N-T-I-A-L

STATE	X	NAVY	X	NSRS		DISTRIBUTION							
ARMY	X	AIR	X	FBI									

CLASSIFICATION CONFIDENTIAL 25X1

COUNTRY USSR REPORT

TOPIC Information on a Lead "Kombinat" in Leninogorsk

25X1

EVALUATION PLACE OBTAINED

DATE OF CONTENT

DATE OBTAINED DATE PREPARED 8 June 1954

REFERENCES

PAGES 3 ENCLOSURES (NO. & TYPE) 2 - sketches on ditto with legends

REMARKS

This is UNEVALUATED Information

25X1

1. The lead Kombinat which, [redacted] was designated "Leninogorskiy Polymetall Kombinat (LPK) was located on the northwestern perimeter of Leninogorsk, previously Ridder (20°20'N lat./83°38'E long) in East Kazakhstan. The Kombinat and the town of Leninogorsk were connected to Ust-Kamenogorsk (50°00'N lat/82°38'E long) by a Soviet-gauge railroad line about 100 km long. Many houses tracks were available at the Kombinat for electric locomotives.[1] 25X1

2. Lead and zinc mining in the Leninogorsk area was started prior to World War I. Between 1885 and 1890, a British engineer with the name of Ridder is said to have received prospecting rights for gold and lead deposits. The gold mined was, allegedly, taken by caravans to Novossibirsk. Until about 1918, the mines were owned by a British company which, however, was forced to give up its rights at the end of World War I. Prior to 1941, the mining industry in Leninogorsk was considerably enlarged. New mines were constructed, an ore dressing plant and lead works as well as a railroad line to Leninogorsk were constructed. Construction work was resumed after 1945 with the help of PWs. A new mine was built, the lead works were enlarged, and a steel foundry was erected.[2]

3. The installation of the lead Kombinat covered a hilly area about 4 x 2 km. The installations fall into four large complexes:

   a. The ore mining installation with three mines, two of them in operation, one under construction; the ore dressing plant and a power plant.
   b. The "Sevinsoviy Savod" lead works with a roasting department, a foundry, a refining department, gold department, and some auxiliary departments.
   c. The construction bureau and repair departments.
   d. A saw mill located to the southwest of the Kombinat proper.

   The Kombinat had a steam power plant of its own. Another hydroelectric power station was under construction on the Ulba River. [redacted] this new power station was in operation by early 1949. In 1949, the power supply was still inadequate and frequently broke down altogether.[3] 25X1

4. The lead deposits extended in a length of four or five kilometers to the northeast from the present center of mining activities and had a width of one or two kilometers. Mining operations were conducted in the Leninogorsk, SSokolniy and Altayskiy mines. The Altayskiy mine was still in process of construction in 1949 and its output was 25X1

25X1

comparatively small. [redacted] the two other mines were nearing 25X1
[redacted]station and were, allegedly, being prepared for demolition in April 1949. The elevator towers of the mine were dismantled and the mine itself was demolished in June 1949. Subs[redacted] a new elevator tower was built at the Ssokolyaiy Mine. The miners had access to the ore deposits through level or slightly inclined galleries, from which they reached the first through third level above them and the fourth through ninth level below them by means of ladders. [redacted] the Ssokolyniy mine had 11 levels. Mining 25X1
activities in the two old mined were conducted on the seventh, eighth, and ninth level. At the head end of the gallery, blasting operations were prepared by American pneumatic hammer drills. [redacted] the work quota for one 25X1
drilling operator was 23 cubic meters per shift. The ore was hauled away in mine lorries which had a capacity of 0.5 to 0.8 tons. One worker had to load 10.5 tons of ore per shift. Mine lorries were pulled by electric locomotives. All [redacted] the ore mined was high-grade ore. It contained besides lead 25X1
and zinc also copper, silver, gold, and platinum. After 1948, mention was also made to bismuth. [redacted]
the total output of ore in all three mines in 1949 was 1,500 to 2,000 tons [redacted] 25X1
during a 24-hour period, [redacted] put this daily output at 1,800 to [redacted] tons of ore. According to [redacted], the daily output mined amounted [redacted] tons.[4]

25X1

5. Ore concentration, agglomerating, smelting and refining plants were available at the Kombinat. In the ore concentration process, lead and zinc concentrates were separated and the zinc concentrates were sent to the zinc foundry in Ust-Kamenogorsk. Only lead was smelted and refined in Leninogorsk. [redacted]
[redacted] copper, silver, gold and platinum were produced by 25X1
electrolytic processes from byproducts of the smelting and refining plants. On the other hand, [redacted] slag and slime were sent from the
Leninogorsk smelting works to Ust-Kamenogorsk. [redacted] 60 to 25X1
80 tons of refined lead cast in ingots of 25 kg were produced within a 24-hour period. Occasionally, the peak output of 90 to 95 km was reached per day. [redacted] reportedly learned [redacted] that 200 tons of lead were scheduled to 25X1
be produced daily in 1952.[5]

6. Leading personnel at the Kombinat in 1949 included:
Beryosa (fnu), director of mines; Menshev (fnu), chief engineer of the Kombinat; and Kopov (fnu), chief manager of the enterprise. [redacted]
[redacted] the Kombinat employed a total of 12,000 to 15,000 workers, including 25X1
about 30 percent women. Work was done in three 8-hour shifts; in some departments four 6-hour shifts were worked.

7. The entire area of the Kombinat inclusive the mines was surrounded by a board fence, two meters high, and guarded by factory police.

1. [redacted] Comment. For location of the lead Kombinat in Leninogorsk, see Annex 1. 25X1
The sketch was made on the basis of [redacted] 25X1
data available to this office. The spur track from the Kombinat to Leninogorsk must have been converted to Soviet-gauge during the war of immediately after the war. It is believed that the railroad line between Leninogorsk and Ust-Kamenogorsk was built during the same period. In 1938, there was only a narrow-gauge line from Sashtchita, west of Ust-Kamenogorsk, to Leninggorsk.

2. [redacted] Comment. Mining operations in Leninogorsk were started as early as 1889. Prior to 1925, only 354,425 tons of sorted ore had been produced there. Between 1914 and 1918, the ore deposits of Leningorsk were exploited by the firm of Urquard. This firm conducted extensive explorations and drilled a total of 22 exploratory bore holes; it also constructed an experimental ore concentration plant. After 1925, the mine at Leninogorsk was enlarged by the Soviets and was scheduled to reach an annual output of 250,000 tons of ore. As early as 1931, ore deposits at Leninogorsk were believed to be fully explored. 25X1

3. [redacted] Comment. For layout of the lead Kombinat, see Annex 2. The sketch was prepared on the basis of concordant information [redacted] 25X1

[redacted] Item A-11 of Annex 2 is believed to be a non-ferrous metal factory which serves the large mechanical department of the enterprise. The installation referred to as British Factory probably is the experimental ore concentration plant erected by the British company between 1914 and 1918. The river shown in Annex 2 is not the Ulba River, but the Filipovka River as mentioned in Annex 1. 25X1

4. [redacted] Comment. The lead and zinc ore deposits of Leninogorsk are part of the deposits of the Kirov Rayon. On the basis of information available in late 1936, these deposits extended about 9 km to the east from Leninogorsk. The total deposits of grade A - C_1 ore available in the Rayon amounted to 28,187,500 tons (C_2 - 23,095,000 tons), the lead content of the ore was 774,300 tons (404,300 tons), the zinc content 1,651,200 tons (1,012,700 tons), and the copper content 283,900 tons (127,200 tons). The ore produced at the Leninogorsk and Ssokolyniy mines of the Kirov Rayon had the highest content of lead and zinc, the lead content being 6.7 percent and the zinc content 11.9 percent. As mining operations have been conducted near Leninogorsk since a long time, the ore vavailable in the upper layers has almost completely been mined. The ore which is at prdsent mined is lead sulfide. It is believed in this connection that the so-called "Roehrenanlage" under construction near the lead works is a sulfuric acid plant cooperating with the roasting department. 25X1

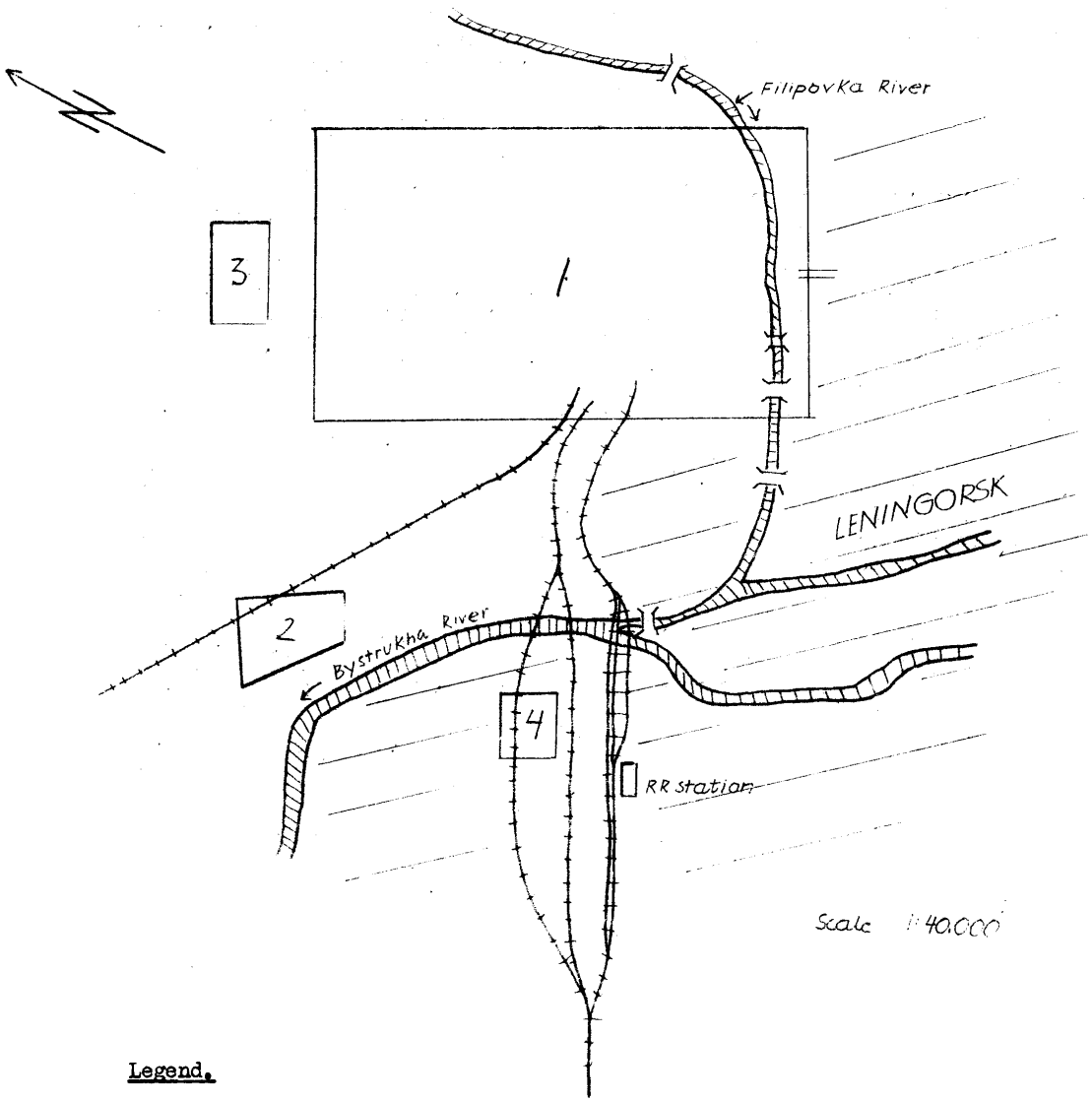
5. [redacted] Comment. It is believed eradibeltthat 60 to 90 tons of lead are daily produced at Leninogorsk. This would correspond to an annual output of about 25,000 tons, while the scheduled 1942 output was fixed at 35,000 tons. These figures do not agree with the daily average output of 1,850 tons of ore. Although it must be taken into consideration that some of the ore required at the Leninogorsk lead works is furnished by the Ssyryanovo mine and concentration plant about 100 km southeast of Leninogorsk, the Ssokolyniy mine alone, in 1949, according to information available to this office, furnished 66 percent of the ore required by the Kombinat. The annual output of 25,000 tons of lead would require an annual output of 650,000 tons of lead ore, i.e. a daily output of 1,850 tons. Since about 60 percent into lead, the total ore production at Leninogorsk should have been at least 1.4 million tons per year or 3,700 tons per day. According to available information, the output of the Ssokolyniy mine and of the ore concentration plant at Leninogorsk remained far below the fixed level. 25X1

CONFIDENTIAL

Annex 1

25X1

Location of the Lead Kombinat in Leninogorsk



Legend.

1 - Lead Kombinat in Leninogorsk

2 - Saw mill

3 - Brick works

4 - Bread factory

CONFIDENTIAL

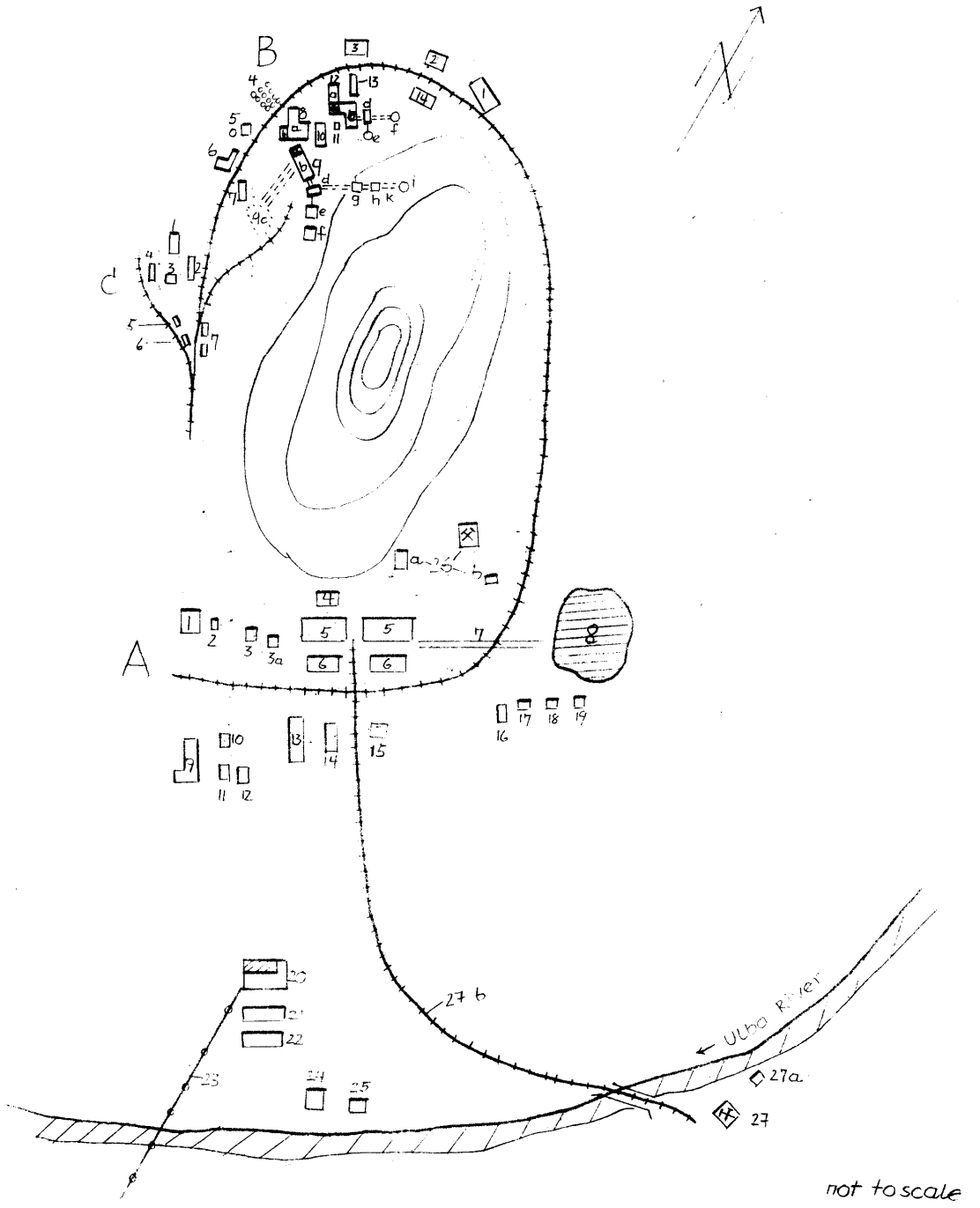
25X1

CONFIDENTIAL

25X1

Annex 2

Layout of the Lead Kombinat.



For legend see next page

CONFIDENTIAL

25X1

Layout of the Lead Kombinat.

Legend:

A Mining installations, ore concentration plant, power supply

1 Iron foundry equipped with several cupular furnaces; replacement parts for factory machines were cast there.

2 Wood pattern shop, also referred to as core making shop. The pattern shop was attached to the iron foundry.

3 Motor vehicle repair shop.

a small forge.

4 through 6 Ore concentration plant built in terraces on the slope of the hill.

4 Crushing plant, allegedly equipped with four ore crushers; also referred to as Factory No 1 by the Soviets.

5 Two workshops equipped with ore crushers and ore washing facilities; lead and ore concentrates were produced there.

6 Drying facilities connected to the two buildings of Item No 5 by hoisting facilities. [redacted] the Soviets referred to the buildings of Item No 5 as Factory No 2. 25X1

7 Canal leading to the water purification point.

8 Purification point. [redacted] several such points were available. 25X1

9 Large mechanical plant with lathes, grinding and annealing department, forge, a boiler forge, a repair shop for locomotives.

10 Kitchen.

11 [redacted] 25X1

12 Storage depot.

13 Compressor shop equipped with eight twin compressors.

14 Plant for the manufacture of sulfuric acid and hydrochloric acid. [redacted] 25X1

15 Boiler plant serving the entire Kombinat. The plant was equipped with three boilers.

16 Kitchen.

17 Baths.

18 Administration buildings.

19 Dressing rooms.

20. Switching station and open-air transformer plant.

21 Power station equipped with one turbine. [redacted] a second turbine was to be installed. 25X1

22 Boiler house for the power plant equipped with eight (sic) boilers.

23 High tension line.

24 Pumping station.

25 Kitchen.

26 "Leninogorski" mine.

a Elevator tower.
b Entrance of pit.

27 "Ssokolyniy" mine. [redacted] 25X1

a. Small forge.
b Narrow-gauge railroad line built for the haulage of ore.

28 "Altayski" mine.

B Lead Works.

1 Carbide plant.

2 Steel foundry equipped with an electric furnace; the plant was completed in 1947.

3 Repair shop equipped with four heavy and six light lathes; a big and two small boring machines, a grinding machine, a shaping machine, and a planing machine.

4 A large "Roehrenanlage" under construction in 1948 and fitted with about 20 pipes, 4 meters high and 1 meter in diameter. [redacted] 25X1

5 Dust removing plant (sic) of the refinery, fitted with a msmokestack 40 meters high and ventilation facilities.

6 Administration building.

7 Repair shop for factory locomotives.

8 Lead refinery and gold plant.

a Four large boilers (sic) used for lead refining and two small boilers (six) for the separation of other non-ferrous metals.
b Gold processing plant, heavily guarded.

9 Lead smeltery.

a Pumping station serving the waterjackets.
b Furnace shop equipped with five furnaces fitted with heating water jackets; four of the furnaces were of British origina. The furnaces were charged by means of conveyer belts leading to the bunkers of the roasting plant. The finished lead was taken to the refinery by means of ceiling crabs.
c Slag dump connected with the furnace shop by an electric narrow-gauge railroad line. Different sorts of slags were stored separately. The slags were shipped by rail for further processing.
d Dust removal plant.
e Dust removal plant.
f Drying plant.
g Dust removal plant.
h Dust removal plant.
i A plant, construction of which started prior to the war.
k Transportation facilities.

11 Transformer station.

12 Ore dump and processing of flux stones.

a Processing of flux stones.
b Ore dump.
c Mixing plant (mixing of ore and flux agents).
d Removal of dust.
e Smokestack.
f. Installation under construction in 1948.

13 Installation under construction in 1949, [redacted] ore storage facilities. 25X1

14 Installation [redacted] referred to by the Soviets as British Factory. 25X1

C Construction Bureau

1 Mechanical department

2 Construction bureau, referred to by the Soviets as Osmo No 4.

3 Forge.

4 Storage depot.

5 Storage depot.

6 Offices.

7 Kitchen and PX shop.

25X1

25X1

CLASSIFICATION C-O-N-F-I-D-E-N-T-I-A-L

[redacted] INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT [redacted]

CD NO [redacted]

DATE DISTR [redacted]

SUBJECT Leninogorskiy Polymetall Kombinat (Lead Combine)

NO. OF PAGES 10

PLACE ACQUIRED [redacted]

NO. OF ENCL [redacted] (LISTED BELOW)

DATE OF INFO. [redacted]

SUPPLEMENT REPORT NO [redacted]

25X1

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF TITLE 18, SECTIONS 793 AND 794, OF THE U. S. CODE, AS AMENDED. ITS TRANSMISSION OR REVELATION OF ITS CONTENTS TO OR RECEIPT BY AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. THE REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS [redacted] INFORMATION

[redacted]

[redacted] Attach[redacted] is [redacted] b[redacted] as received.

2. On page 3, Field Comment 1, line 7, S[redacted]shtch[redacted]a should be Zashchita. 25X1

[redacted] 8)

25X1

25X1

CLASSIFICATION C-O-N-F-I-D-E-N-T-I-A-L

STATE	X	NAVY	X	NSRB		DISTRIBUTION									
ARMY	X	AIR	X	FBI											

25X1

25X1

CLASSIFICATION CONFIDENTIAL

COUNTRY USSR REPORT

TOPIC Information on a Lead "Kombinat" in Leninogorsk

EVALUATION PLACE OBTAINED 25X1

DATE OF CONTENT

DATE OBTAINED DATE PREPARED 8 June 1954 25X1

REFERENCES

PAGES 3 ENCLOSURES (NO. & TYPE) 2 = sketches on ditto with legends 25X1

REMARKS This is UNEVALUATED Information

25X1

1. The lead Kombinat which was designated "Leninogorskiy Polymetall Kombinat (LPK) was located on the northwestern perimeter of Leninogorsk, previously Ridder (50°20'N lat./83°38'E long) in East Kazakhstan. The Kombinat and the town of Leninogorsk were connected to Ust-Kamenogorsk (50°00'N lat/82°38'E long) by a Soviet-gauge railroad line about 100 km long. Many house tracks were available at the Kombinat for electric locomotives.[1] 25X1

2. Lead and zinc mining in the Leninogorsk area was started prior to World War I. Between 1885 and 1890, a British engineer with the name of Ridder is said to have received prospecting rights for gold and lead deposits. The gold mined was, allegedly, taken by caravans to Novossibirsk. Until about 1918, the mines were owned by a British company which, however, was forced to give up its rights at the end of World War I. Prior to 1941, the mining industry in Leninogorsk was considerably enlarged. New mines were constructed, an ore dressing plant and lead works as well as a railroad line to Leninogorsk were constructed. Construction work was resumed after 1945 with the help of PWs. A new mine was built, the lead works were enlarged, and a steel foundry was erected.[2]

3. The installation of the lead Kombinat covered a hilly area about 4 x 2 km. The installations fall into four large complexes:

   a. The ore mining installation with three mines, two of them in operation, one under construction; the ore dressing plant and a power plant.
   b. The "Savinzoviy Savod" lead works with a roasting department, a foundry, a refining department, gold department, and some auxiliary departments.
   c. The construction bureau and repair departments.
   d. A saw mill located to the southwest of the Kombinat proper.

   The Kombinat had a steam power plant of its own. Another hydroelectric power station was under construction on the Ulba River. this new power station was in operation by early 1949. In 1949, the power supply was still inadequate and frequently broke down alltogether.[3] 25X1

4. The lead deposits extended in a length of four or five kilometers to the northeast from the present center of mining activities and had a width of one or two kilometers. Mining operations were conducted in the Leninogorsk, SSokolniy and Altayskiy mines. The Altakyskiy mine was still in process of construction in 1949 and its output was

CLASSIFICATION CONFIDENTIAL

DISTRIBUTION

25X1

comparatively small. [redacted] the two other mines were nearing exhaustion and were, allegedly, being prepared for demolition in April 1949. The elevator towers of the mine were dismantled and the mine itself was demolished in June 1949. Subsequently a new elevator tower was built at the Ssokolyniy Mine. The miners had access to the ore deposits through level or slightly inclined galleries, from which they reached the first through third level above them and the fourth through ninth level below them by means of ladders. [redacted] the Ssokolyniy mine had 11 levels. Mining activities in the two old mined were conducted on the seventh, eigth, and ninth level. At the head end of the gallery, blasting operations were prepared by American pneumatic hammer drills. [redacted] that the work quota for one drilling operator was 23 cubic meters per shift. The ore was hauled away in mine lorries which had a capacity of 0.5 to 0.8 tons. One worker had to load 10.5 tons of ore per shift. Mine lorries were pulled by electric locomotives. All [redacted] the ore mined was high-grade ore. It contained besides lead and zinc also copper, silver, gold, and platinum. After 1948, mention was also made to bismuth. [redacted] the total output of ore in all three mines in 1949 was 1,500 to 2,000 tons of ore during a 24-hour period, [redacted] put this daily output at 1,800 to 2,100 tons of ore. According to [redacted] the daily output mined amounted to 3,000 tons.[4]

25X1
25X1
25X1
25X1
25X1

5. Ore concentration, agglomerating, smelting and refining plants were available at the Kombinat. In the ore concentration process, lead and zinc concentrates were separated and the zinc concentrates were sent to the zinc foundry in Ust-Kamenogorsk. Only lead was smelted and refined in Leninogorsk. [redacted] copper, silver, gold and platinum were produced by electrolytic processes from byproducts of the smelting and refining plants. On the other hand, [redacted] slag and slime were sent from the Leninogorsk smelting works to Ust-Kamenogorsk. [redacted] 80 tons of refined lead cast in ingots of 25 kg were produced within a 24-hour period. Occasionally, the peak output of 90 to 95 km was reached per day. [redacted] reportedly learned [redacted] that 200 tons of lead were scheduled to be produced daily in 1952.[5]

25X1
25X1
25X1

6. Leading personnel at the Kombinat in 1949 included: Beryosa (fnu), director of mines; Menshev (fnu), chief engineer of the Kombinat; and Kopov (fnu), chief manager of the enterprise. [redacted] the Kombinat employed a total of 12,000 to 15,000 workers, including about 30 percent women. Work was done in three 8-hour shifts; in some departments four 6-hour shifts were worked.

25X1

7. The entire area of the Kombinat inclusive the mines was surrounded by a board fence, two meters high, and guarded by factory police.

1. [redacted] Comment. For location of the lead Kombinat in Leninogorsk, see Annex 1. The sketch was made on the basis of concordant information of all sources and data available to this office. The spur track from the Kombinat to Leninogorsk must have been converted to Soviet-gauge during the war of immediately after the war. It is believed that the railroad line between Leninogorsk and Ust-Kamenogorsk was built during the same period. In 1938, there was only a narrow-gauge line from Sashtchita, west of Ust-Kamenogorsk, to Leninogorsk.

25X1

25X1

2. [redacted] Comment. Mining operations in Leninogorsk were started as early as 1889. Prior to 1925, only 354,425 tons of sorted ore had been produced there. Between 1914 and 1918, the ore deposits of Leningorsk were exploited by the firm of Urquard. This firm conducted extensive explorations and drilled a total of 22 exploratory bore holes; it also constructed an experimental ore concentration plant. After 1925, the mine at Leninogorsk was enlarged by the Soviets and was scheduled to reach an annual output of 250,000 tons of ore. As early as 1931, ore deposits at Leninogorsk were believed to be fully explored. 25X1

3. [redacted] Comment. For layout of the lead Kombinat, see Annex 2. The sketch was prepared on the basis of concordant information [redacted] 25X1

[redacted] Item A-11 of Annex 2 is believed to be a non-ferrous metal factory which serves the large mechanical department of the enterprise. The installation referred to as British Factory probably is the experimental ore concentration plant erected by the British company between 1914 and 1918. The river shown in Annex 2 is not the Ulba River, but the Filipovka River as mentioned in Annex 1. 25X1

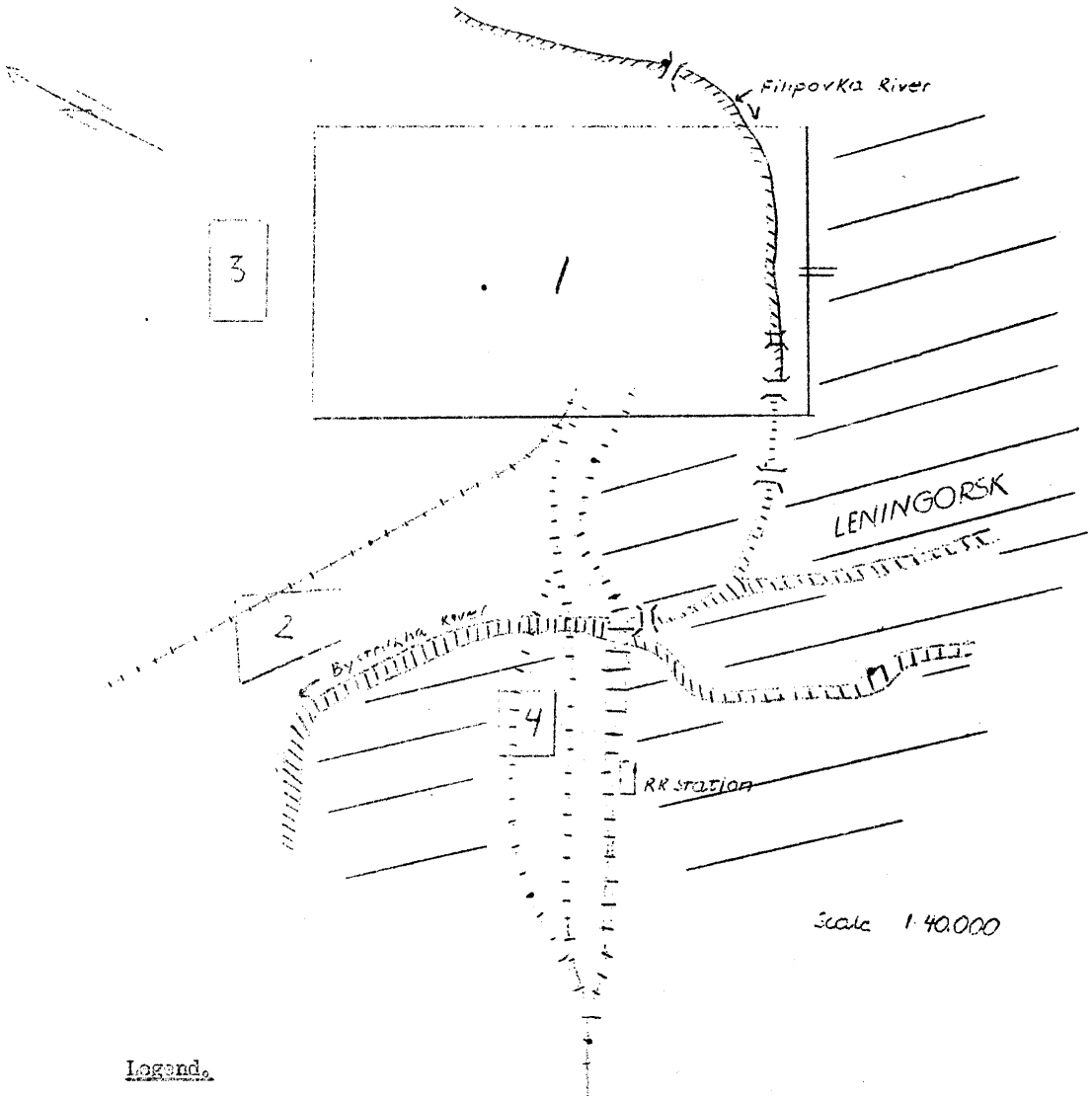
4. [redacted] Comment. The lead and zinc ore deposits of Leninogorsk are part of the deposits of the Kirov Rayon. On the basis of information available in late 1936, these deposits extended about 9 km to the east from Leninogorsk. The total deposits of grade $A - C_1$ ore available in the Rayon amounted to 28,187,500 tons (C_2 - 23,095,000 tons), the lead content of the ore was 774,300 tons (404,300 tons), the zinc content 1,651,200 tons (1,012,700 tons), and the copper content 283,900 tons (127,200 tons). The ore produced at the Leninogorsk and Ssokolyniy mines of the Kirov Rayon had the highest content of lead and zinc, the lead content being 6.7 percent and the zinc content 11.9 percent. As mining operations have been conducted near Leninogorsk since a long time, the ore available in the upper layers has almost completely been mined. The ore which is at present mined is lead sulfide. It is believed in this connection that the so-called "Roshrenanlage" under construction near the lead works is a sulfuric acid plant cooperating with the roasting department. 25X1

5. [redacted] Comment. It is believed credibel that 60 to 90 tons of lead are daily produced at Leninogorsk. This would correspond to an annual output of about 25,000 tons, while the scheduled 1942 output was fixed at 35,000 tons. These figures do not agree with the daily average output of 1,850 tons of ore. Although it must be taken into consideration that some of the ore required at the Leninogorsk lead works is furnished by the Zyryanovo mine and concentration plant about 100 km southeast of Leninogorsk, the Ssokolyniy mine alone, in 1949, according to information available to this office, furnished 66 percent of the ore required by the Kombinat. The annual output of 25,000 tons of lead would require an annual output of 650,000 tons of lead ore, i.e. a daily output of 1,850 tons. Since about 60 percent into lead, the total ore production at Leninogorsk should have been at least 1,4 million tons per year or 3,700 tons per day. According to available information, the output of the Ssokolyniy mine and of the ore concentration plant at Leninogorsk remained far below the fixed level. 25X1

Annex 1

25X1

Location of the Lead Kombinat in Leninogorsk



Legend.

1 - Lead Kombinat in Leninogorsk

2 - Saw mill

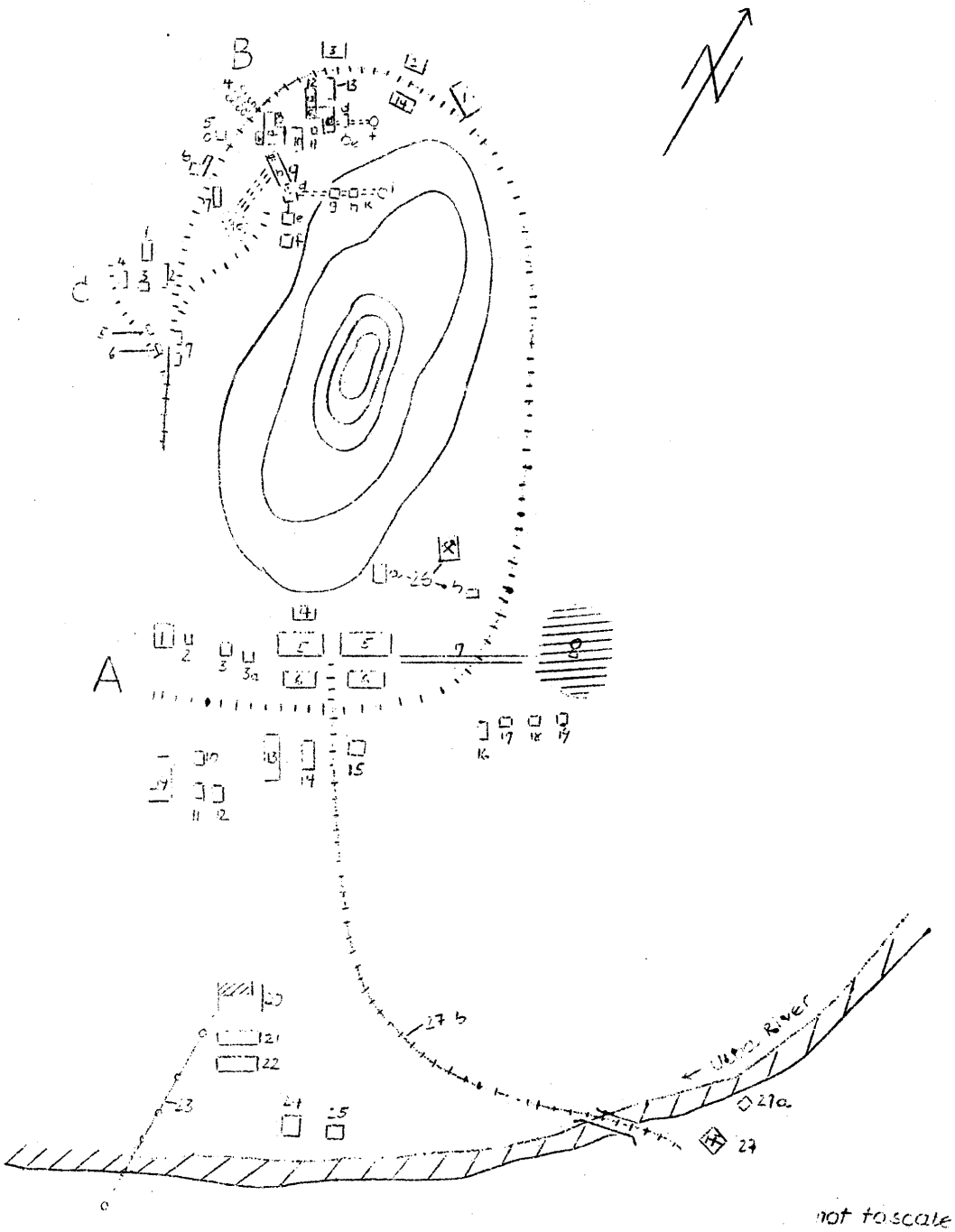
3 - Brick works

4 - Bread factory

Annex 2

25X1

Layout of the Lead Kombinat.



For legend see next page

Annex 8

Layout of the Lead Kombinat.

25X1

Legend:

A Mining installations, ore concentration plant, power supply

1 Iron foundry equipped with several cupular furnaces; replacement parts for factory machines were cast there.

2 Wood pattern shop, also referred to as core making shop. The pattern shop was attached to the iron foundry.

3 Motor vehicle repair shop.

a small forge.

4 through 6 Ore concentration plant built in terraces on the slope of the hill.

4 Crushing plant, allegedly equipped with four ore crushers; also referred to as Factory No 1 by the Soviets.

5 Two workshops equipped with ore crushers and ore washing facilities; lead and ore concentrates were produced there.

6 Drying facilities connected to the two buildings of Item No 5 by hoisting facilities. [redacted] the Soviets referred to the buildings of Item No 5 as Factory No 2. 25X1

7 Canal leading to the water purification point.

8 Purification point. [redacted] 25X1

9 Large mechanical plant with lathes, grinding and annealing department, forge, a boiler forge, a repair shop for locomotives.

10 Kitchen.

11 [redacted] 25X1

12 Storage depot.

13 Compressor shop equipped with eight twin compressors.

14 Plant for the manufacture of sulfuric acid and hydrochloric acid. [redacted] 25X1

15 Boiler plant serving the entire Kombinat. The plant was equipped with three boilers.

16 Kitchen.

17 Baths.

18 Administration buildings.

19 Dressing rooms.

25X1

9 Lead smeltery.

a Pumping station serving the waterjackets.
b Furnace shop equipped with five furnaces fitted with heating water jackets; four of the furnaces were of British origin . The furnaces were charged by means of conveyer belts leading to the bunkers of the roasting plant. The finished lead was taken to the refinery by means of ceiling crabs.
c Slag dump connected with the furnace shop by an electric narrow-gauge railroad line. Different sorts of slags were stored separately. The slags were shipped by rail for further processing.
d Dust removal plant.
e Dust removal plant.
f Drying plant.
g Dust removal plant.
h Dust removal plant.
i A plant, construction of which started prior to the war.
k Transportation facilities.

11 Transformer station.

12 Ore dump and processing of flux stones.

a Processing of flux stones.
b Ore dump.
c Mixing plant (mixing of ore and flux agents).
d Removal of dust.
e Smokestack.
f Installation under construction in 1948.

13 Installation under construction in 1949, [redacted] ore storage facilities. 25X1

14 Installation [redacted] referred to by the Soviets as British Factory. 25X1

C Construction Bureau

1 Mechanical department

2 Construction bureau, referred to by the Soviets as Osmo No 4.

3 Forge.

4 Storage depot.

5 Storage depot.

6 Offices.

7 Kitchen and PX shop.

25X1

Annex 2

25X1

20 Switching station and open-air transformer plant.

21 Power station equipped with one turbine.
a second turbine was to be installed. 25X1

22 Boiler house for the power plant equipped with eight (sic) boilers.

23 High tension line.

24 Pumping station.

25 Kitchen.

26 "Leninogorski" mine.

a Elevator tower.
b Entrance of pit.

27 "Ssokolyniy" mine.
25X1

a Small forge.
b Narrow-gauge railroad line built for the haulage of ore.

28 "Altayski" mine.

B Lead Works.

1 Carbide plant.

2 Steel foundry equipped with an electric furnace; the plant was completed in 1947.

3 Repair shop equipped with four heavy and six light lathes; a big and two small boring machines, a grinding machine, a shaping machine, and a planing machine.

4 A large "Rechrenanlage" under construction in 1948 and fitted with about 20 pipes, 4 meters high and 1 meter in diameter.
25X1

5 Dust removing plant (sic) of the refinery, fitted with a smokestack 40 meters high and ventilation facilities.

6 Administration building.

7 Repair shop for factory locomotives.

8 Lead refinery and gold plant.

a Four large boilers (sic) used for lead refining and two small boilers (sic) for the separation of other non-ferrous metals.
b Gold processing plant, heavily guarded.